DOCUMENT RESUME

ED 086 872 CE 000 907

AUTHOR Peck, Hugh I.
TITLE Career Development Exemplary Project, Washington, D. C. Schools, 1972-73. Final Evaluation Report.
INSTITUTION District of Columbia Public Schools, Washington, D.C.; Institute for the Development of Educational Auditing, Arlington, Va.
SPONS AGENCY Bureau of Adult, Vocational, and Technical Education (DHEW/OE), Washington, D.C.
REPORT NO 0-361-0137
PUB DATE Jun 73
CONTRACT OEC-0-70-4785(361)
NOTE 68p.; For the program evaluated in this document see CE 000 906

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Career Education; Community Involvement; Cost Effectiveness; *Educational Programs; Elementary Grades; Junior High Schools; Measurement Instruments; *Pilot Projects; Program Design; *Program Evaluation; Tables (Data); Vocational Development

ABSTRACT

The Career Development Exemplary Project (CDEP), is one phase of the District of Columbia Schools' efforts to place career development into the main stream of the school curriculum. The program as a whole and the development of a career education assessment battery using the information based evaluation (IBE) approach is described in detail in this independent evaluation. The instruments used were: (1) for students: Self Observation Scale, School Sentiment Index, Work Attitude Survey, Occupational Preference Inventory, Occupational Values Inventory, and Career Awareness Development Inventory, (2) for teachers: Classroom Observation Scale, Instructional Strategies Log, Career Education Teacher Practices Survey, and Evaluation of Career Education Curriculum Guides, and (3) for others: Education Decision Makers Scale. Findings for these scales are presented and discussed. They included improved personal and work oriented attitudes among the CDEP students. However, at the teacher and administrator level, the CDEP resources were not used to the full extent possible and the level of community involvement was not high in spite of high level of community support for the program. On the basis of the evaluation recommendations are made concerning inservice programs, evaluation design, reduction of costs, community involvement, and project expansion. (SA)

ED 086872

FINAL EVALUATION REPORT

Career Development Exemplary Project
Washington, D.C. Schools

1972-73

Prepared by:

Dr. Hugh I. Peck
Senior Consultant

Submitted to:

Mrs. Bessie Etheridge
Director
Career Development Exemplary Project
District of Columbia Schools
Washington, D.C.

Reviewed By:

Gerald R. Matson
Vice President

June 1973

INSTITUTE FOR DEVELOPMENT OF EDUCATIONAL AUDITING
1121 Arlington Boulevard - Suite 57
Arlington, Virginia 22209

Career Development Exemplary Project
Washington, D.C.
Final Evaluation Report

Table of Contents

Acknowledgements i

Preface ii

Contents iii

I. Executive Summary and Recommendations 1

II. Program Description 5

III. Evaluation Design 9

- Information Domains 9
- Information Users 10
- Evaluation Questions 11
- Population Selection Procedures 12
- Instrumentation 15

IV. Evaluation Results by Information Domains . . . 19

- Student Outcomes 19
  - Non-Cognitive 20
  - Cognitive 30
- Cost Analysis 44
- Teacher Outcomes 47
  - Implementation of the Model 47
  - Practices 49
  - Strategies 52
- Staff and Board Attitudes 53
- Curriculum Development 56
- Community Involvement 60
- Model Generalizability 61

ACKNOWLEDGEMENTS

The author wishes to acknowledge the assistance of Mr. King Nelson, President of IDEA, for his assistance relative to data and file management, Mr. A. Jackson Stenner for his assistance in data analysis and interpretation, and Dr. W. G. Katzenmeyer, Mr. John Russell and Mr. Steve Schulz, for their assistance in the data processing. Mr. Steve Davis and Mrs. Lynn Robison assisted with the classroom observations.

Hugh I. Peck
Senior Consultant

INSTITUTE FOR DEVELOPMENT OF
EDUCATIONAL AUDITING

July 1973

PREFACE

Career Education represents one of our nation's major thrusts to make school relevant. The Career Development Exemplary Project is one phase of the District of Columbia Schools' efforts to place career development into the main stream of the school curriculum. This report evaluates the efforts of CDEP and makes some recommendations for its improvement.

The authors express their appreciation to Mrs. Bessie Etheridge, Project Director, Mrs. Ellen Datcher and Mrs. Martha Roache, Assistant Directors, who devoted many hours of their time to assisting in this evaluation design. Further, there were over 150 teachers and principals and 3,000 students who participated in the implementation of this evaluation. Without the effort of these people, there could not have been an evaluation of CDEP. In fact, a special note of appreciation should go to the participating teachers who have gone "the-second-mile" to implement career education into the learning experiences of their children. Four schools - Browne, Webb, Young and Evans - were pioneers in career education for District of Columbia Schools. These people have provided numerous suggestions and considerable support throughout the evaluation activities.

Unless the results herein lead to some positive action on the part of Project Staff and D.C. Schools, our efforts have only fulfilled some Federal requirement and the lives of children are no better. This would disappoint us as well as mean failure in all our tasks.

Annual Evaluation Report
1972-73
Career Development Exemplary Project
Washington, D.C. Schools
Executive Summary and Recommendations

Section I

The 1972-73 evaluation of the Career Development Exemplary Project (CDEP) in the District of Columbia Schools was completed by the Institute for Development of Educational Auditing. CDEP is funded through Parts C and D of Public Law 90-576, known as the Vocational Education Act, and through limited funds from ESEA Title I. The project fuses the concept of career education into the instructional program of nearly 3,000 students and 150 teachers and administration in D.C. schools. Though this is the third year of the project, this is the first year of Institute involvement in the evaluation.

The project focuses on the utilization of career education concepts in the D.C. instructional program through continuing staff development and inservice training, the provision for career education aides to assist teachers, the addition of equipment and materials for career education in classroom environment and the publication and implementation of teacher career education guides. The overall goal of CDEP is to see that the career education or development is fused into the existing instructional program for a more relevant curriculum.

During the spring of 1973 a career education assessment battery was administered to CDEP students and to non-CDEP students after extended planning, discussion and training.

In addition, classrooms were visited by the evaluation team, and budget information was examined. The following conclusions and findings resulted from the evaluation.

1. Students in the career education program have a more positive self concept than others.
2. Students in CDEP are able to recognize that there is dignity in all work and that a variety of jobs is required by a society.
3. Primary and elementary students in the CDEP program have a more positive attitude toward school, teachers and learning than others. Conclusions concerning attitudes of junior high students are withheld.
4. Students in the program rank salary as their primary value in career choice. There is not agreement among students regarding the rank of other values, such as prestige or advancement.
5. Students in the CDEP tend to better relate social and academic skills to work situations than non-CDEP students even though the different is not significant.
6. More students in the CDEP prefer to work in association with others than independently. More control students prefer to work independently.
7. Recurring costs for career education are about $100.00 per pupil per year after a three year start-up period of about $250.00 per year.
8. The best estimate for equipment for a classroom for career education and development is $450.00 for start up and $150.00 annually. These amounts are included in the per pupil costs.

9. Teachers are not implementing the career education model at the expected level of efficiency.
10. Teachers are not utilizing the career development resources available in the D.C. schools at an expected level.
11. Teachers are able to fuse the concepts of career education into their teaching programs.
12. On a survey, administrators, Board Members, Teachers and Committee Personnel ranked career education second only to reading for importance in the instruction program. This conclusion, however, has not been shown consistent at the policy and decision making level.
13. The Career Education Curriculum Guides, developed by the Metropolitan Education Council, are not being well used at a reasonable level by teachers involved.
14. The community indicates a high level of support for the career education program.
15. The level of community involvement in the career development process was not high.

As a result of the Institute's evaluation of CDEP, the following recommendations are presented:

1. Programs of inservice, education and staff development should be focused on:
   (a) use of the career development guides
   (b) use of local resources
   (c) implementation of career education concepts
   (d) fusion of career development in existing programs

2. An evaluation design that uses gain scores as a partial measure of success should be implemented.
3. Efforts should be made to reduce start-up costs and recurring per pupil costs.
4. A community career development resource guide should be developed or updated and placed in the hands of teachers.
5. Viewed nationally, the District of Columbia career education program is operating with an administrative staff smaller than most such projects. Serious consideration should be given to an expansion of this staff and the addition of a community resource coordinator.
6. Although the student outcomes, community support, and cost analyses indicate the model is ready for expansion, we suggest only limited expansion until the teacher outcomes are at a greater level of expectancy.

SECTION II: PROGRAM DESCRIPTION

The Career Development Exemplary Project (CDEP) is a part of the Division of Instructional Services of the District of Columbia Schools. It is jointly funded by Part D of the Vocational Education Act of 1968 and Title I of the Elementary and Secondary Education Act of 1968. Its offices are located in Carver Elementary School in Washington, D.C. though it serves nearly 3000 children and a staff of teachers, aides and principals of more than 150.

The purpose of CDEP is to assure that career education and its concepts are an integral part of a relevant program of education for all students at all levels of instruction. Operating as a pilot program, CDEP utilizes five major components to accomplish its goal:

- staff development
- curriculum development
- community involvement
- equipment and materials
- administration

CDEP is administered by a project director, an elementary and a secondary assistant and a small clerical support staff. During the early history of the project, a

curriculum development contract was entered into with the Metropolitan Council of Staff Development to provide ten curriculum guides for grades seven and eight, one in each of ten occupational clusters. Project teachers and staff developed a handbook of suggested activities and a curriculum guide for grades one through six. Guides for grade nine are now in the developmental process. Project teachers and staff have assumed the responsibility for developing these guides. The ten occupational clusters are:

- hospitality, recreation and personal service
- manufacturing, marketing and distribution, business and office occupations
- transportation
- public service
- health
- communications and media
- consumer and homemaking
- fine arts and humanities
- construction and environment
- agribusiness, natural resources and marine science

As of the spring of 1973 these guides are complete. They will be in the hands of the project teacher participants in September, 1973.

CDEP's major component is the staff development or inservice education activity. The two phases of staff development are the summer intensive training program and the Saturday follow-up program. The summer program operates for four weeks. The content of the workshop includes the following:

- Study of the conceptual design of the Career Development Program
- Study of the pilot (exemplary project) in depth- goals, organization, curriculum, progress
- Introduction to local resources for the program

- Communication skills
- Human relations skills
- Curriculum development
- Production of instructional materials
- Hands-on experiences
- Field trips
- Planning and organization
- Evaluation skills
- Role definition

There were four three-hour Saturday workshops held every other month from October through May for all new personnel. The focus of these workshops includes the following:

Role of Teachers, Counselors and Administrators
Continued orientation
Curriculum research and development
Teaching skills
Management skills
Hands-on experiences
Role of Aides and Volunteers

Each classroom in the Project receives special materials, equipment and supplies which supplement the regular school program. These items provide the teacher with an array of up-to-date books, tools and materials that are selected for his age children. These items focus on the concepts of career education and assist the teacher in making the world of work real to the children.

CDEP has as one of its goals to inform the community about career education to solicit community support for the program and,more important,to involve the resources of the community in the education of the child.

The District of Columbia has a wealth of resources that can assist teachers in making the world of work and the relationship between work and the classroom relevant to children. CDEP trains and encourages teachers to utilize those resources to the fullest advantage of the children. An important focus of career education is outside the school classroom. Career education brings the community and its resources into the school and takes the students into the community.

SECTION III: EVALUATION DESIGN

The evaluation approach selected for implementation in the CDEP is called information based evaluation (IBE) as proposed by Stenner* (1972). Two evaluation design conferences were held among Institute and CDEP staff to carefully consider the information users, the information domains and finally to establish the evaluation questions of interest to the project. These three areas were crucial to the implementation of an information based approach to evaluation.

The attached Information Requirement Matrix presents the results of these endeavors. After the users and the domains were established, users were polled to determine the priority that was given to each information domain. On Table I the domains and users are presented in priority order.

Information Domains

The nine information domains in priority order were:

1. student attitude
2. project costs
3. student cognitive growth
4. model generalizability
5. community involvement
6. curriculum implementation and teacher practices

---

* Stenner, A. Jackson. An Overview of Information Based Evaluation: A Design Procedure. The Institute for Development of Educational Auditing, Arlington, Va. 22209

Table I

INFORMATION BASED EVALUATION WORKSHEET
INFORMATION REQUIREMENTS MATRIX

DOMAINS	USERS: Project Director	Project Staff	C.D. Staff for D.C.	USOE	Community	Board of Education	Local School Staff	Superintendent	Associate Superintendent
Student Attitude									
Projeot Costs									
Student Cognitive Growth									
Model Generalizability									
Community Involvement									
Curriculum Implementation									
Curriculum Development									
Teacher Attitude									
Administrator Attitudes									

Institute for Development of Educational Auditing Copyright 1972

7. curriculum development
8. teacher attitude and inservice education
9. administrator attitudes

Information Users

The nine primary information users in priority order are:

1. project director
2. project staff
3. career development staff for D.C.
4. USOE
5. community
6. board of education
7. local school staff
8. superintendent
9. associate superintendent

Education Questions

In utilizing IBE as our model, the next phase was a statement of evaluation questions in each information domain. There were no anticipated number of questions in each domain, and some questions may reflect into more than one of the information domains. Twenty-five questions were stated, refined, and approved by the project director.

Evaluation questions of interest by information domains follow. The importance of these questions cannot be underestimated. They, more than any other item, dictated the scope and quality of the evaluation effort.

Information Domain: Student Attitude Status

1. Is the self-concept of CDEP students more positive than that of non-CDEP students?

2. Are the attitudes toward work of CDEP students more positive than that of non-CDEP students?

3. Are the attitudes toward school of CDEP students more positive than that of non-CDEP students?

4. Do CDEP students have a positive attitude toward the project?

Information Domain: Project Cost Analysis

5. What are the per pupil costs of the CDEP program on the following basis:

   1. proposed expenditures

   2. actual expenditures

   3. expenditures on fiscal year basis?

6. What are the costs by fiscal year of the following components of CDEP:

   1. administration

   2. curriculum development

   3. staff development

   4. materials

   5. equipment

   6. support services

   7. curriculum implementation?

Information Domain: Student Cognitive Growth

7. Do CDEP students know more about career opportunities than non-CDEP students.

8. Do CDEP students recognize the relationship between a skill learned in school and skill performance on the job?

9. Do junior high CDEP students recognize the types of job opportunities available within fifty miles from D.C.?

Information Domain: Model Generalizability

(Data for this domain is drawn from questions stated in other domains. These questions are: 5, 6, 12, 20, 21, 23, 24 and 25.)

Information Domain: Community Involvement

10. What is the level of community awareness of CDEP?

11. What is the attitude of the community toward CDEP?

12. What is the level of community awareness of career opportunities?

13. What community resources concerning career development do teachers use? What is the level of use?

Information Domain: Curriculum Implementation and Teacher Practices

14. What career development practices do participating teachers use? How often are they used?

15. What is the relationship between number and utility of career development practices and length of time in the program?

16. Are CDEP teachers implementing the model as proposed?

17. What career development materials and equipment are available at each participating school?

18. What use is made of the available materials and equipment?

(Note: Question 13 applies to this domain also.)

Information Domain: Teacher Inservice and Attitude

19. What is the level of knowledge of CDEP teachers concerning careers and career development?

20. What are the CDEP classroom teachers' attitudes concerning career development?

21. What are the CDEP teacher's attitude toward the project?

Information Domain: Curriculum Development

22. Are teachers using the career development modules developed by the Metropolitan Educational Council for Staff Development?

23. Are the modules in consistent and usable format as presented to the CDEP?

Information Domain: Administrators Attitudes

24. What are the attitudes of school administrators toward the place of career development in the school curriculum?

25. What are the attitudes of school administrators toward the CDEP?

Instrumentation

Instruments for this evaluation were reviewed by the CDEP staff, project participants and approved by the D.C. Administration.

Student

Self Observation Scale - a self-measure of students self-concept for Grades K through 9. Developed and standardized by IDEA used for the first time.

School Sentiment Index: a measure of student attitude toward school. Subscales include peer, school and family in general. Developed at UCLA and factored by IDEA. Grades K through 9.

Work Attitude Survey: a survey to determine if students see value in a variety of jobs, Grades 3 through 9.

Occupational Preference Inventory: a measure of student career and preference choices that relate tools, environment and arts to vocational areas. Developed at Washington State University.

Occupational Values Inventory: Developed at Pennsylvania State University to determine career factors of value to students.

Career Awareness Development Inventory: a survey to determine if students can relate developed skills to job clusters.

Teachers

Classroom Observation Scale: a scale for reporting the results of trained observers' visits to career education classrooms.

Instructional Strategies Log - a log for reporting the specific activities of classroom teachers.

Career Education Teacher Practices Survey - a survey to determine the frequency of use of certain career education practices by project staff.

Evaluation of Career Education Curriculum Guides - a survey to permit teachers to evaluate Career Evaluation manuals.

Others

Education Decision Makers Scale - a professional and lay questionnaire requesting respondents to assess the priority they give career education in the total curriculum and school.

Study Population

Thirteen Washington, D.C. schools were involved in the project, ten elementary and three junior high schools. Table I shows the schools involved and a grade by grade enrollment of those schools. It should be noted that these figures show students enrolled in the CDEP project and are not necessarily total school enrollments. (Table 2)

There were 141 teachers, 7 counselors, 4 teacher coordinators, 11 aides and 20 local administrators participating in the project in addition to the professional central office staff of three. These data do not include secretarial support personnel.

In so far as possible, the total project population was used as the study or experimental group. When control groups were required to respond to an evaluation question, they were selected with the aid of the CDEP staff.

Participation in CDEP was voluntary for teachers; therefore, students in the study are those who teachers chose to be in the project. There is a total of 2,714 students who were involved in the program during the spring 1973 assessment period.

Table 2

CDEP Grade and School Enrollment
Grade

School	K	1	2	3	4	5	6	7	8	9	TOTAL
Amidon				26							26
Drew		31	30	27							88
Lennox	22		26	25							73
Sts. Paul & Augustine		27	28								55
Syphax		28									28
Tubman			27	25							52
Tyler		25	29								54
Webb	49	63	89	60	58	62	64				445
Young	21	61	88	47	57	51	27				352
Jefferson								141			141
Brooke								162	417	151	730
Evans								492	126		618
TOTAL	92	262	290	210	115	113	91	795	543	151	2662

SECTION IV: EVALUATION RESULTS

Results of the evaluation of the Career Development Exemplary Project are present by the domains established at the design conference and reported in the Evaluation Design Document prepared by the Institute and approved by the project staff. Data from each instrument is present under the primary domain with which it is concerned. If one instrument is used in another domain,it is discussed in both areas of this report.

The domains are presented as follows:

- Student Outcomes
  - Non-Cognitive
  - Cognitive
- Cost Analysis
- Teacher Outcomes
  - Practices
  - Strategies
  - Model Implementation
- Staff and Board Attitudes
- Curriculum Development
- Community Attitude and Involvement
- Model Generalizability

Student Outcomes: Non-Cognitive

Three major instruments were used to measure student attitude:

The Self Observation Scale (SOS)
The School Sentiment Index (SSI)
The Work Attitude Scale (WAS)

The Self Observation Scale is a recently standardized measure of self-concept developed by the Institute. After the SOS was administered to the CDEP and control students it was empirically factored to determine the various subscales that would result. Two levels, Primary (K-3) and Intermediate (4-9), were used. The results of the factor analyses on the SOS primary yielded the following subscales:

*Anxiety
School Affinity
*Frustration
*Self Assurance
Social Assurance
School Success

On those subscales marked (*), a low score is the desirable result.

The results of the factor analysis for the Intermediate level yielded the following six subscales:

Self Assurance
Self Satisfaction
School Affinity
Teacher Affinity
*Anxiety
Cooperation

Those subscales marked (*) indicate that a low score is desirable.

Table 3 presents the results of the SOS for the CDEP (experimental) and the control students. Realizing that the SOS is now in developmental form and is undergoing continuous analysis, we present the following analysis of the data to date.

Presented are a total of twelve comparisons between CDEP and control students. Eight of the twelve show no significant difference. Three of the twelve show a significant difference favorable to the CDEP group. None are significantly favorable to the control group. One half (4) of the non-significant subscales favor the experimental group, two of the non-significant scores favor the control group. Generally, seven of the twelve subscales favor the CDEP children;only two favor the control children.

As a result,we conclude the CDEP children show a better self concept.

A major goal of the CDEP was to teach children that there is dignity in all work and that all types of jobs are necessary to the existence of a society. A unique Work Attitude Survey (WAS) was used in an attempt to measure this affective domain. The complete instrument was presented in the Instrument Catalog. Generally, this instrument presented forty brief "want ads" which the teacher read to the students. After hearing all the "ads", students marked the ten they would answer if they were seeking a job.

Table 3

Career Development Exemplary Project
Self Observation Scale
Number, Means and Standard Deviation
on Six Subscales for Control and
Experimental Groups

Primary Level

Subscale	N	$\bar{X}$	SD	N	$\bar{X}$	SD
* Anxiety	197	555.28	38.11	188	565.38	41.48
School Affinity	197	346.07	48.47	188	335.99	37.80
* Frustration	197	609.39	43.60	188	607.60	44.19
* Self Assurance	197	72.54	52.10	188	66.63	48.44
Social Assurance	197	417.49	28.20	188	413.62	32.39
School Success	197	247.56	51.40	188	237.31	45.11

Intermediate Level

Self Assurance	259	156.36	60.66	47	234.06	155.16 (void
Self Satisfaction	259	720.87	69.27NS	47	705.77	75.61
School Affinity	259	52.57	36.04NS	47	52.72	33.25
Teacher Affinity	259	181.02	46.68NS	47	192.85	50.74
* Anxiety	259	365.92	40.52	47	374.83	41.47
Cooperation	259	484.14	48.45	47	472.70	52.70

* low score desirable

group favored by score

difference is significant at .05

Our goal was to develop a system of scoring the "ads" to determine if students were choosing only those "high level" jobs or were their selections reasonably distributed across all forty jobs. The assumption being that if teachers were able to get the "dignity of work" message across to students, it would reflect in the distribution.

Table 4 presents the total number of experimental and control students, the general description of the want ads and the percent of students in each group who selected that ad as one of their ten. An examination of the Table reveals that the experimental students have a more reasonable distribution among their selections, i.e., fewer ads with less than 15% selection. We may also note that the CDEP students selected teacher, bookkeeper and housecleaner fewer times and computer programmer, Western Union delivery, law aide, and florists more times. In view of today's work force needs, CDEP students seem to have a more realistic view.

We conclude that career education students are able to see dignity in all work and have a realistic view of todays job market.

Table 5 presents the same information as the previous table by grade level in grades 1 through 9. An examination of this Table shows a much more reasonable distribution among students in the upper elementary and junior high grades than among students in the lower grades. Whether it is maturation, career education or a combination of both,we can conclude that

Career Development Exemplary Project
Washington, D.C.
Work Attitude Survey
Number of Experimental and Control Students,
Percent of Students Elected to Respond to Each
Want Advertisement

	Percent: C*	E		Percent: C	E
Doctor	45.3	41.8	Dental Assistant	21.2	20.9
Economic Analyst	11.8	15.1	Public Relations	15.4	21.4
Legal Secretary	33.0	31.5	Printer	17.9	19.2
Iron in Own Home	19.9	17.5	Cook-Short Order	36.5	35.5
Fashion Designer	39.5	40.2	Delivery-General	9.8	17.8
Plasterer	25.7	25.1	Telegraph Operator	19.1	29.8
Teacher	50.9	43.5	Salesperson-Store	29.7	38.1
Unskilled Laborer	13.6	15.9	Technical Writer	18.9	23.0
Sanitation Worker	14.4	13.4	Manager-Travel Agent	18.1	21.3
Bookkeeper-lg. firm	43.6	37.2	College President	18.6	21.7
Salesman-self emp.	21.2	19.1	Law Aide	20.2	26.9
Secretary	39.8	38.1	Commercial Artist	24.4	22.2
Graduate School	36.3	33.7	Bookkeeper-small firm	23.2	28.1
Housecleaner	24.4	19.3	Florist	15.7	22.7
Computer Programmer	38.3	41.8	Chef	20.2	18.2
Airline Ticket Sales	34.3	34.7	Farm Worker	10.8	10.7
Airline Pilot	24.4	24.8	Plastic Inspector	12.1	13.5
Manager-Hotel	44.1	39.4	Ditch Digger	9.3	8.1
Child Care Worker	22.2	25.4	Clerk	14.4	15.6
Clerk -Accounts Payable	11.1	13.1	Dishwasher	20.2	17.1

*C = control group of 397

E = experimental group of 1240

Table 5

Career Development Exemplary Project
Washington, D.C. Schools
Work Attitude Survey

Grades 1 thru 9 - Percent of Students Who Elected to Respond to Each Want Advertisement by Grade:

Job Description	1	2	3	4	5	6	7	8	9
Doctor	58%	53%	49%	51%	46%	33%	37%	36%	23%
Economic Analyst	21%	14%	18%	12%	9%	16%	13%	14%	12%
Legal Secretary	45%	41%	27%	42%	25%	34%	27%	22%	33%
Iron in Own Home	34%	30%	31%	24%	14%	10%	8%	12%	5%
Fashion Designer	36%	34%	30%	42%	38%	43%	46%	45%	45%
Plasterer	37%	26%	32%	31%	21%	24%	19%	23%	20%
Teacher	52%	54%	60%	56%	44%	42%	48%	24%	29%
Unskilled Laborer	28%	20%	19%	11%	9%	12%	12%	15%	12%
Sanitation Worker	32%	24%	25%	12%	9%	8%	6%	5%	6%
Bookkeeper-lg. firm	48%	49%	48%	42%	27%	39%	31%	28%	44%
Salesman-self emp.	27%	22%	24%	16%	12%	21%	20%	17%	16%
Secretary	32%	35%	35%	40%	41%	31%	46%	39%	44%
Graduate of School	30%	24%	25%	33%	33%	45%	44%	37%	35%
Housecleaner	32%	32%	37%	27%	15%	9%	13%	14%	6%
Computer Programmer	25%	20%	34%	44%	35%	46%	50%	48%	65%
Airline Ticket Sales	30%	33%	33%	35%	32%	33%	39%	37%	34%
Airline Pilot	22%	27%	20%	29%	30%	30%	22%	30%	16%
Manager-Hotel	21%	42%	36%	53%	51%	43%	41%	41%	32%
Child Care Worker	25%	22%	25%	30%	23%	21%	23%	28%	25%
Clerk -Accounts Payable	12%	9%	13%	9%	10%	16%	10%	16%	22%

Career Development Exemplary Project
Washington, D.C. Schools
Work Attitude Survey
(continued)

Job Description	1	2	3	4	5	6	7	8	9
Dental Assistant	12%	25%	20%	20%	25%	20%	20%	24%	22%
Public Relations	13%	13%	10%	21%	19%	26%	23%	30%	23%
Printer	13%	28%	17%	16%	20%	21%	17%	17%	22%
Cook - short order	28%	37%	54%	38%	48%	35%	34%	28%	20%
Delivery - general	14%	17%	12%	7%	18%	18%	20%	18%	15%
Telegraph Operator	13%	18%	20%	20%	31%	36%	37%	32%	31%
Salesperson - store	16%	26%	24%	36%	35%	48%	42%	44%	50%
Technical Writer	10%	21%	12%	16%	25%	29%	23%	31%	29%
Manager Travel Agent	14%	20%	12%	18%	21%	27%	26%	24%	24%
College President	17%	15%	16%	22%	30%	29%	20%	22%	22%
Law Aide	9%	15%	10%	21%	23%	40%	32%	36%	37%
Commercial Artist	18%	23%	28%	24%	23%	20%	23%	24%	19%
Bookkeeper-small firm	15%	19%	23%	16%	31%	35%	30%	29%	37%
Florist	16%	21%	20%	16%	25%	28%	20%	20%	28%
Chef	14%	21%	17%	19%	24%	32%	17%	15%	12%
Farm Worker	12%	13%	15%	11%	14%	11%	8%	8%	7%
Plastic Inspector	9%	12%	12%	7%	13%	18%	14%	16%	17%
Ditch Digger	5%	13%	16%	9%	9%	6%	7%	4%	7%
Clerk	8%	15%	11%	14%	21%	9%	18%	17%	20%
Dishwasher	19%	33%	28%	22%	14%	11%	10%	15%	10%

students in the program gain appreciation for the dignity of work as they move through their school career. We further conclude that students' work attitudes become more realistic as they move through the school program.

It is of particular interest and programmatically important to select certain careers and trace the percentage selected as one moves higher into the school grades. Some jobs (for example, airline ticket salespersons) seem to have a rather steady following across all grades. Others (doctors) have a large "fan club" among primary children, but show sharp decline in the upper grades. The pattern of selection for "Teacher" is of unique interest.

There are, of course, a number of viable hypotheses as to why these phenomena occur. None of them seems to stand alone as the reason for such change, whether the hypotheses are maturity, realism, or career education activities.

The School Sentiment Index (SSI) was administered to CDEP and control students in grades K through 9. The SSI has three levels - primary, elementary and secondary. The Institute had utilized the primary and intermediate level in an earlier study and had an opportunity to factor analyze the results to empirically determine the factors or subscales.

The analyses of the two levels yielded the following subscales:

Primary

School Activities
*School Fairness

Elementary

Teacher Security
Teacher Satisfaction
*Peer Relations
*School Alienation
*Teacher Alienation

The SSI Secondary Level has not been factor analyzed at this point,and the following subscales are based on the publisher's directions:

Teacher
Climate
Peer
Learning
General

Table 6 presents the comparison of control and experimental groups on the School Sentiment Index for primary, intermediate and secondary level. On the primary and intermediate levels two of the seven subscales significantly favor the CDEP children and one the control groups. A total of five of the seven subscales favor the experimental (CDEP) students and one favors the control. For the elementary students we, therefore, conclude that CDEP students have a more positive attitude toward school.

Data on the secondary students, grades 7, 8, and 9, are not as clear. First, a factor analysis of the secondary level is

---

* indicates that a low score is desirable

Table 6

Career Development Exemplary Project
Washington, D.C. Schools
Results of the School Sentiment Index Primary, Intermediate, Secondary Comparisons of Experiment and Control Children, Means, Standard Deviations and t Values

Subscale	N	Experimental Mean	S.D.	N	Control Mean	S.D.	t Value	
Primary								
School Activities	655	95.54	34.43	495	93.54	36.30	0.9418	
*School Fairness	655	299.04	19.83	475	302.98	18.90	3.3663	**
Elementary								
Teacher Security	251	206.59	17.40	120	200.65	19.23	2.9693	**
Teacher Satisfaction	251	50.04	18.46	120	51.27	17.48	0.6111	
*Peer Relation	251	260.51	19.12	120	265.42	29.03	1.9394	
*School Alienation	251	46.41	13.96	120	48.68	13.96	1.4838	
*Teacher Alienation	251	126.52	15.78	120	122.22	15.85	2.4493	**
Secondary								
Teacher	529	92.93	11.55	42	105.81	12.48	6.9161	**
Climate	567	50.30	5.70	48	51.73	5.11	1.6742	
Peer	626	15.25	2.44	49	16.43	2.87	3.2062	**
Learning	627	13.91	2.65	46	13.95	2.19	0.1265	
General	600	26.73	4.45	48	26.79	4.09	0.0904	
Total	434	119.12	19.60	38	216.55	18.77	5.2739	**

* Low score is desirable

** Significant at the .05

being prepared as of the date of this report, and more data will be forthcoming. Secondly, four of the six subscales show a very small standard deviation indicating a very restricted distribution among the scores of secondary students. Thirdly, there were a very small sampling of control students (less than 50) and a much larger group of experimental students (more than 60). However, data presented does show, within the above constraints, more positive attitudes toward school on the part of control students. To date, conclusions regarding the secondary students are withheld.

Student Outcomes: Cognitive

In order to determine student cognitive outcomes of the CDEP, three instruments were selected:

Career Awareness Development Inventory (CADI)
Occupational Values Inventory (OVI)
Occupational Preference Inventory (OPI)

In the traditional sense of the word, these are not "cognitive" instruments, per se, however, the application of these scales to this particular project represents our attempt to look at cognitive areas in career education in a non-traditional way (not achievement). Thus, we choose to view these instruments as related to the knowledge students had concerning careers as well as their values, preference or awareness.

The Occupational Values Inventory (OVI) seeks to determine, through two approaches to measurement, which factors students

feel important in selecting a career. The entire instrument and scoring procedure was presented in the CDEP Instrument Catalog. On the first scale of the inventory students are required to rank the most and least important statements from 65 sets of three sentences, such as:

> This work is personally satisfying.
> It's what I've been shooting for.
> This job demands the respect of others.

On the second scale students are asked to rank seven factors in order of importance when planning a career. This inventory was given to junior high students only.

Table 7 presents the results of the Occupational Values Inventory for all students. Tables 8, 9, and 10 present the same data for grades 7, 8, and 9, respectively. The seven values are presented in rank order as are the seven factors according to the choices of the CDEP students. Examination of the Tables reveals, first, that students are very consistent in their choices, and that there is relatively little variance (small standard deviations) within all the various subscales or is there significant variance between the subscale distributions.

In all cases, except the two at grade eight, "salary" is the number one value or factor under consideration when students are selecting a career or job. However, once the number one and seven factors are chosen, there is little agree-

Table 7

Career Development Exemplary Project
Washington, D.C. Schools
Results of the Occupational Values Inventory
on Seven Subscales and Rank Order of Factors

All Grades

Subscales	N	Mean	Standard Deviation
Salary	585	16.02	6.06
Preparation & Ability	585	15.93	5.00
Advancement	585	15.27	4.86
Personal Goal	585	14.94	4.33
Interest & Satisfaction	585	13.88	4.47
Prestige	585	12.27	4.40
Security	585	9.69	4.31

Rank Order of Career Factors of Importance

Factors	N	Mean	Standard Deviation
Salary	503	2.75	2.00
Interest & Satisfaction	503	2.98	1.86
Preparation & Ability	503	3.75	1.85
Advancement	503	4.03	1.58
Personal Goal	503	4.04	1.77
Prestige	503	5.06	1.63
Demand	503	5.39	1.79

Table 8

Career Development Exemplary Project
Washington, D.C. Schools

Results of the Occupational Values Inventory
on Seven Subscales and Rank Order of Factors

Grade 7

Subscale	N	Mean	Standard Deviation
Salary	316	16.84	5.92
Prestige	316	16.07	4.82
Preparation & Ability	316	15.80	4.32
Personal Goal	316	14.71	4.02
Interest & Satisfaction	316	13.95	4.17
Personal Goal	316	12.69	4.40
Security	316	10.21	4.24

Rank Order of Career Factors of Importance

Factors			
Salary	300	2.74	1.97
Interest & Satisfaction	300	3.02	1.91
Preparation & Ability	300	3.72	1.86
Advancement	300	4.07	1.61
Personal Goal	300	4.20	1.70
Prestige	300	4.98	1.68
Demand	300	5.24	1.86

Table 9

Career Development Exemplary Project
Washington, D.C. Schools

Results of the Occupational Values Inventory
on Seven Subscales and Rank Order of Factors

Grade 8

Subscales	N	Mean	Standard Deviation
Preparation & Ability	193	15.60	5.07
Personal Goals	193	15.10	4.44
Salary	193	14.53	5.78
Advancement	193	14.07	4.99
Interest & Satisfaction	193	14.03	4.70
Prestige	193	11.97	4.47
Security	193	9.62	4.39

Rank Order of Career Factors of Importance

Factors			
Interest & Satisfaction	138	2.65	1.86
Salary	138	3.37	2.25
Preparation & Ability	138	3.50	1.74
Personal Goals	138	3.86	1.76
Advancement	138	4.06	1.55
Prestige	138	5.10	1.46
Demand	138	5.42	1.75

Table 10

Career Development Exemplary Project
Washington, D.C. Schools

Results of the Occupational Values Inventory
on Seven Subscales and Rank Order of Factors

Grade 9

Subscales	N	Mean	Standard Deviation
Salary	119	15.78	6.08
Advancement	119	15.67	5.51
Preparation & Ability	119	15.51	4.98
Personal Goal	119	14.92	4.69
Interest & Satisfaction	119	13.34	4.70
Prestige	119	11.54	4.30
Security	119	8.54	4.04

Rank Order of Career Factors of Importance

Factors			
Salary	93	2.16	1.52
Interest & Satisfaction	93	3.11	1.68
Advancement	93	3.76	1.46
Personal Goal	93	3.86	1.81
Preparation & Ability	93	4.11	1.89
Prestige	93	5.06	1.62
Demand	93	5.90	1.53

ment either among grade levels or between the directly ranked factor or the forced choice results of the first part of the inventory. At the low end of the scales, job security and demands of the job were insistently the last value for the forced choice and the direct ranking procedures, respectively.

CDEP students are realists in their career planning. They obviously see the need for a high salary as the path to personal improvement.

The Career Awareness Development Inventory (CADI) was developed by the Institute specifically for the CDEP evaluation. The purpose of CADI is to determine if students are able to relate academic and social skills learned in school to career and job activities and to determine if CDEP students indicate a reasonable level of aspiration among job opportunities. CADI has three subscales with fifteen items in each subscale as follows:

social skills
academic skills
aspiration

The complete inventory was presented in the Instrument Catalog and approved by the CDEP staff. This was the first administration of CADI and it must be considered as an experimental measure. CADI was given to students in grades six through nine and to CDEP and control students.

Results of the CADI are presented in Table 11. Of particular interest are the results of the social and academic scales comparing CDEP and control students. The measure of levels of aspiration represents a forced choice test situation rather than a right or wrong answer situation as in three of the first two subscales. Although differences on the three did not reach the .05 level of significance, results of the social skills subscale approached that level of confidence and the CDEP students were favored on the remaining two subscales.

Table 12 presents the results of the CADI by grade level and seems to reveal that the ability to relate social and academic skills learned in school to work situations is not related to grade level. Seventh and eighth grade children do not score lower on the subscale than ninth grade children. Children enrolled in the CDEP project are able to relate school learned skills to work situations at a reasonable level of proficiency.

The Occupational Preference Inventory (OPI) was designed at Washington State University cooperatively with the State Coordinating Council for Occupational Education of Washington. Generally, the OPI is used to assist individual students in narrowing their career choices. For this study, however, it was used to study the preference of CDEP students as a group to compare their choices with control students not exposed to the career education program. A copy of the OPI was presented

Table 11

Career Awareness Development Inventory
Washington, D.C.
Results of the Career Awareness Development Inventory
Number, Means, Standard Deviations and t Values for
Experimental & Control Students

	Experimental			Control			
Subscales	N	Mean	S.D.	N	Mean	S.D.	t Value
Social Skills	960	8.22	2.57	209	7.98	2.39	1.2637
Academic Skills	960	9.48	2.95	209	9.42	2.88	0.2233
Aspiration Level	960	5.57	2.57	209	5.45	2.32	0.9211

* significant at the .05 level

Table 12

for Grade 6,7,8,9

	Six			Seven			Eight			Nine		
Subscale	N	X	SD	N	X	SD	N	X	SD	N	X	SD
Social Skills	152	8.30	2.17	280	8.19	2.50	296	8.77	2.82	133	8.04	2.42
Academic Skills	152	9.69	2.84	280	9.55	2.86	296	9.67	2.96	133	9.68	3.60
Aspiration Level	152	5.84	2.33	280	5.71	2.35	296	5.16	2.59	133	5.34	2.73

in the Instrument Catalog.

Results of the OPI may be viewed as a matrix of occupation preferences and job or work preferences. The five occupational areas are:

construction
service
office
health
retail

The six preference areas that are job related are:

tools
environment
materials
acts
tool and acts combined
tools, acts & environment combined

The final subscale reports the human relations choice of the respondents. Does he prefer to work alone or with others (independent - association)?

Tables 13, 14, and 15 present the results of all students, the CDEP students and the control students on the OPI respectively. Examination of the Tables, though presenting a considerable consistency among all students in the study, do reveal some important differences. CDEP students have a greater preference for working in association with others than do the control students. If one accepts five percent points as an important difference, we find that:

(a) control students prefer those acts associated with the construction trade more than CDEP students.

Table 13

Career Developement Exemplary Project
Washington, D.C.
Results of Occupational Preference Survey
Number and Percent Six Preferences in
Five Occupational Areas

All Students Surveyed

Preference Areas	Construction N	%	Office N	%	Service N	%	Health N	%	Retail N	%	Total
Tool	1291	16	2531	32	1034	13	1274	16	1884	23	8014
Environmental	887	11	2164	28	617	8	2122	27	2047	26	7837
Work Material	1431	18	1904	24	679	9	1660	21	2155	28	7829
Acts Preferences	1291	16	2206	28	1307	17	981	13	2054	26	7839
Tools and Acts	1304	17	2146	27	1227	16	1087	14	2056	26	7820
Acts, Tools and Environment	977	15	1881	15	970	15	968	15	1629	25	6425

Preference Areas	Independent N	%	Associated N	%
Human Relations	1714	42	2333	58

Table 14

Career Development Exemplary Project
Washington, D.C.
Results of Occupational Preference Survey
Number and Percent Six Preferences in
Five Occupational Areas

Experimental Students

Preference Areas	Construction N	%	Office N	%	Service N	%	Health N	%	Retail N	%	Total
Tools	1176	17	2276	32	860	12	1110	16	1664	23	7086
Environment	804	11	1965	26	513	7	2390	32	1816	24	7488
Materials	1276	18	1688	24	602	9	1487	21	1931	28	6984
Acts	1135	16	1974	28	1153	17	873	13	1832	28	6967
Tool and Acts	1142	16	1931	28	1085	16	933	13	1848	27	6739
Tool, Act and Environment	863	13	1656	25	855	13	847	13	1451	23	5672

	Independent N	%	Association N	%
Human Relations	1515	42	2096	58

Table 15

Career Development Exemplary Project
Washington, D.C.
Results of Occupational Preference Survey
Number and Percent Six Preferences in
Five Occupational Areas

Control Students

Preference Areas	Construction N	%	Office N	%	Service N	%	Health N	%	Retail N	%	Total
Tools	129	15	255	30	114	13	164	19	194	23	856
Environment	83	10	199	23	104	12	245	28	231	27	862
Materials	115	18	216	26	77	9	173	21	224	26	845
Acts	156	21	232	31	154	20	106	14	212	41	761
Tool and Acts	132	16	215	17	142	17	154	18	208	24	851
Tool, Acts and Environment	113	15	225	30	115	15	121	16	178	24	752

	Independent N	%	Association N	%
Human Relations	201	46	238	54

(b) CDEP students prefer the tool and acts of office work more than do control students

(c) control students prefer the acts of the retail trade business more than the CDEP students.

Though this area of the evaluation applied the OPI in a unique approach to the measurement of occupational preference, some of the results seem important to the project. CDEP prefer to work in association with others more than non-CDEP students. Occupational preferences are generally about the same for CDEP and non-CDEP students.

Cost Analysis

The operational costs of a project are of primary importance to project decisionmakers. There are a variety of ways to investigate cost of operating projects. Perhaps the most often quoted statistic is the per pupil cost of a project. CDEP has been operating since fiscal year 71. Table 16 presents summary data on per pupil cost of the CDEP.

Table 16
Annual Total and Per Pupil Cost for the Career Development Exemplary Project for FY 1971 - 1972 - 1973

Year	Total Budget	Number of Students Served	Per Pupil Cost
1971	$ 205,813	650	$ 316.63
1972	219,437	823	266.63
1973	345,024*	2662	129.61

As would be expected, the annual per pupil cost has been decreasing since the first fiscal year. The decreases are dramatic as students are added each year. The addition of the Title I funds to the Vocational Education funds for FY 73 made a significant change in the per pupil cost for the third year. Certain budget restrictions made it necessary to allot Title I funds in unique ways. Although it is somewhat unrealistic to compute per pupil costs only for vocational education supported

---

* Funds for the operation of CDEP for FY 73 included $216,724 of Vocational Education Funds and $128,000 for ESEA Title I.

programs, it amounts to $101.03 per pupil. In fact, 51% of the students involved were Title I eligible students.

The reduction of the per pupil costs over the three year period suggests a general and recurring cost of approximately $100.00 per pupil per year to implement the Washington, D.C. Career Education model once a three year start-up period is completed.

Projects may be viewed as a combination of a variety of components and the components studied for their individual costs. Some caution should be used when viewing projects for components costs for often a single component funded separately could not operate. However, we have investigated the costs of the following components within the career education program:

Administration
Curriculum Development
Staff Development
Materials and Equipment
Curriculum Implementation

The most critical area in determining component costs is the allotment of staff time to the separate components. After extensive discussion with the project director and assistant directors, the following were agreed upon as percent of time allotments to the various components:

Director:

Administration	50%
Curriculum Development	10%
Staff Development	25%
Curriculum Implementation	10%
Materials, Selection and Procurement	5%

Assistant Directors:

Administration	20%
Curriculum Development	15%
Staff Development	25%
Curriculum Implementation	25%
Materials, Selection and Procurement	15%

Utilizing the above time allotment for the professional staff and separating other costs into their respective components, we have arrived at the following expenditures:

*Administration	$ 74,143
Curriculum Development	17,368
Staff Development	106,906
Curriculum Implementation	132,794
Materials and Equipment	28,038

We feel that it needs repeating that to view components separately and to assume that a single component could function independently for that dollar amount is unrealistic.

It is important for decisionmakers to know the actual cost of equipping a classroom for career education. That is, if D.C. is to expand the Career Education project into other classrooms, instructional supplies and equipment must be added. Further, it takes time and resources for the selection and procurement process. Funds expended for these during FY 73 are as follows:

Instructional Supplies	$46,561
Instructional Equipment	17,030
Selection & Procurement	5,456
TOTAL	$69,047

* All secretarial and evaluation costs have been assigned to the Administrative component even though they served each of the components.

There were 141 teachers involved in the program and $69,047 was spent to equip the classrooms. Thus, the per classroom cost for supplies and equipment was $489.69. The major portion of this amount was spent in non-recurring expenses. Most equipment and supplies that are purchased are non-consumable and, thus, are purchased only one time. Our best estimate of start-up costs and annual recurring costs are $450.00 and $150.00, respectively, for each career education equipped classroom.

Teacher Outcomes

In order to respond to evaluation questions concerned with the teacher's role in the career development project, the following instruments were used. The instruments included the subscales as noted.

Classroom Observation Scale

- Use of Multi Media in Teaching
- Differentiating Assignments
- Use of Intra Class Grouping
- Independence in Learning

Career Education Teacher Practices Survey

Instructional Strategies Log

Education Decisionmakers Scale*

Implementation of the Model

The Classroom Observation Scale for Career Education was modified from an earlier version in order to assess specific

* Results reported in another Domain

practices of teachers related to career development. The complete observation scale was presented in the Instrument Catalog Three trained observers from the Institute staff visited one-fourth of the classroom teachers involved in the project. Counselors, librarians, physical education instructors, art instructors and some others were deleted from the visits which were randomly planned since their role did not relate to the observation schedule. Each teacher visited was observed for thirty to forty minutes before observations were recorded. No individual teacher was assessed or evaluated as a result of the observations. Rather, all the observations were assimilated into a unified picture of the practices and techniques used by the participating teachers.

Table 17 presents the results of the observations. Included in the Table are the subscale, the range of possible scores for that subscale and the means of the observed teachers,and the expected level of performance. Expectancy on this case is determined by computing an average or "3" score for each of the observations in a particular subscale.

In each area of concern,teachers' performances are lower than expected. Although teachers are consistent in implementing the CDEP model as presented through the Classroom Observation Scale, they have not yet reached the level of proficiency that is desired. We conclude that teachers are consistently implementing the model because of the narrow range of mean scores on the four subscales presented in the Table. We further con-

clude that the level of expectancy is a reasonable and desirable goal for project teachers although they have not, at this time, reached the desired proficiency.

It is the recommendation of the evaluation team that the Classroom Observation Scale be transposed into a guide for two or three staff development workshops. The subscales and the items on the COS are representative of the types of methodology consistent with the CDEP Model. If these become training guides, teachers have a knowledge of the types of thing CDEP is looking for and, thus, a greater knowledge of the model itself.

Table 17
Career Development Exemplary Project
Classroom Observation Scale
Range and Means for Subscales

Subscale	Range	Mean	Level of Expectancy
Use of Multi Media	6-30	14.40	18.00
Differentiating Assignments	5-25	11.80	15.00
Class Groupings	5-25	12.12	15.00
Independence in Learning	6-30	13.96	18.00

Practices

The Institute's Career Education Teacher Practices Survey was completed by twenty-five (about one-fifth) of the teachers participating in CDEP. Each practice must be viewed separately in order to interpret the results of the survey. Obviously,

some practices such as "field trips" are used only occasionally and others, such as "career education materials" could be daily activities. Each practice is presented along with the percent of responses in each category.

An inspection of the following Table 18 reveals that the most often expressed practice among participating teachers is the integration of basic skills with career education, one of the basic concepts recommended by the project. Generally, the utilization of the various career education practices seem to fall into reasonable ranges for the practices presented. Teachers are using the concepts and practices of the career education program in their classrooms.

There are particular areas that need attention in the staff development phase of the program. Forty-two percent of the respondents never use Career Activities Centers. Although this is low, we recognize that many schools had no space for a Center. Other activities that teachers seem to need is more assistance in using are:

(a) visits to industries and to self-employed persons

(b) visits to professional persons

(c) use of local resource persons or having workers to visit the classrooms for demonstrations and discussions

(d) use of professional employment agencies - not necessarily as placement but to assure that students are aware of their function

(e) joint planning at the Career Resource Center or some other designated place.

Career Education Teacher Practices Survey
Percent of Responses by Categories for Each Item

	Daily	Times Weekly	Times Monthly	Times Yearly	Never
1. Career Education Materials	33	57	9	0	1
2. Class Presentation of Career Opportunities	1	46	29	0	13
3. Newspaper ads and magazines related to job opportunities	9	27	41	4	23
4. Inter-relation of concepts and careers	43	22	25	4	13
5. Career Activities Center in your school	11	26	21	0	42
6. Displays concerning careers and jobs	46	25	4	13	16
7. Career Education films or filmstrips	0	18	45	23	13
8. Use of local resource persons in Career Ed	0	4	26	35	35
9. Visits to self-employed persons	0	5	5	43	47
10. Visits to factories or plants	0	0	5	45	55
11. Career related role playing and simulations	4	23	36	24	9
12. Visits to professional persons	0	0	9	45	45
13. Group discussion of careers and job opportunities	4	40	28	24	4
14. Pupil selection of career field of interest	0	23	29	33	15
15. Integration of basic skills with career education	59	23	9	0	9
16. Use of library resources related to careers	13	43	13	22	9
17. Use of audio facilities in career education	8	36	36	4	16
18. Use of professional employment agencies	0	0	14	14	72
19. Joint Planning using the Career Development Resource Center at Carver	0	0	17	17	65

We recommend that the activities selected to be included on the survey should be a guide to inservice education planners. Teachers use techniques and practices that they are secure and comfortable in using. Staff developement is the component of the project to assist teachers in initiating new practices.

Strategies

Determination of teacher strategies for implementing career education was made utilizing a Teacher Strategies Log which required that teachers log their daily activities for five days. Logs were kept in fifteen minute segments by twenty project teachers during one week in April 1973. The evaluation design called for a determination of the percent of time and type of strategies teachers used on fusing career education into classroom activities. Therein lies the problem. Since CDEP career education strategy encouraged the fusion of those concepts with regular curriculum activities, teachers would record mathematics or social studies activities, while teaching arithmetic or history as it relates to the world of work. While such activities were desirable, they negated the value of the teachers log in computing percent of time in teaching career education concepts.

A thorough review of the weekly activity logs received and usable by the Institute office allow some statements of findings or results regarding the implementation of the CDEP model. Conclusions drawn from the Teachers Strategies Log are not justified. The following findings seem reasonable,

however:

Teachers participating in CDEP spend about one quarter of their time in specific career education activities.

Teachers participating in CDEP are limited in the variety of activities they use in implementing career education concepts.

Much of the equipment and materials provided by the project is not utilized effectively or regularly by participating teachers.

Special teachers, e.g., art, physical education, etc., are not closely relating to career concepts to their teaching programs.

Board and Staff Attitudes

The measurement of attitudes is an elusive task for the CDEP evaluation. It was agreed that attitude might best be defined as the priority given career education in relation to other areas. The Educational Decisionmakers Scale (see Instrument Catalog) was designed by the Institute to determine what priority concerned groups of citizens gave to the process of career education. A "blind" questionnaire technique was chosen, and two hundred seventy one questionnaires were mailed to Board members, Committee members, Administrators and citizens who might be involved in making the decisions concerning the future of career education in the District. Sixty-seven of the 271 questions or 24.72% were returned. It should be mentioned that this is an excellent response for this type of survey.

Generally, an 18 to 20% response is more typical of this type of mailing questionnaire. Our past experience has yielded a percent of responses ranging from 5 to 20%.

The blind questionnaire was used to minimize the possibility of respondents responding in ways that might assume the tester wanted them to respond. The questionnaire was not "scored" in the usual sense of the word. Rather, each item was viewed and analyzed independently. Note that each question sets a hypothetical decisionmaking situation and requests that respondents assign priorities. The questions and responses were as follows:

1. The Board of Education has allocated $100.00 per classroom for teachers to purchase supplemental materials. You are asked to suggest possible dollar allocations in the following areas. How much of the $100.00 would you recommend for each of the following?

Reading materials	30.00
Arithmetic materials	20.49
Science Kits	14.40
Career education materials	24.40
Physical education equipment	9.04

Respondents felt that Career Education materials were second in importance only to reading, then arithmetic, science and physical education.

2. Staff Development or inservice education has been allocated a $1,000,000.00 budget for the next fiscal year. You have been asked to allot 100% of these funds to specific inservice activities. What percent of the total amount would you allot to the following inservice areas:

Remedial reading techniques	28
Student enrichment program	14
Career education	23
Remedial mathematics	18
Human relations	13
Other (please name)	4

(continued)

Note that in the above situation only reading inservice activities were seen as more important than career education, incidently in agreement with Item I.

3. Elementary school teachers are often asked to allot their teaching time among the various school areas and subjects. You have been asked to recommend policy guidelines to teachers for time allotments. What percent of time per week would you propose for the following areas:

Reading	23
Language Arts	10
Mathematics	15
Social Studies	9
Career Education	11
Science	8
Physical Education	6
Music	5
Art	4
Other (please name)	1

With regard to classroom time respondents felt that reading and mathematics were of primary importance and that career education ranked third. It should be pointed out at this point that a major element of the D.C. Career Education model is that career education is woven into the various subject areas and taught less often as an individual subject.

4. One hundred new positions have been made available for D.C. schools next year. They are to be used only in the following categories. How many staff members would you assign to each of the following categories:

Drug Abuse counselors	21
Career development specialists	33
Library assistants	15
Assistant principals	17
Music teachers	13

Respondents saw career development specialists as the most important supplemental specialists to add among the five choices presented for D.C. schools. Since reading specialists were not among the possible choices, we were unable to determine if the early conclusion in this regard was held.

5. Funds are available to build one additional high school in your school district. Which type of school would you recommend?

Area Vocational-Technical School	36
Comprehensive School	23
Prepatory School	2
Traditional High School	2

(continued)

Most respondents (36) felt that area vocational-technical schools are viable alternates for the D.C. system. More than fifty percent of the respondents saw it as the one they would like to see built.

6. One new wing is to be added to each of the present high schools. Which type of wing would you give top priority?

Physical Education	3
Career Laboratory	54
Language Laboratory	6
Science Wing	3

More than eighty percent (54) of the respondents felt that career education laboratories were of primary importance when compared to the other three above.

Generally, career education was considered by the respondents to be second only to reading in importance for students. The CDEP has done an excellent job of reaching the public and the D.C. decisionmakers on the importance of career education. This is especially true when one considers the amount of publicity and concern that has been shown for reading over the years and the three year life of the project.

The above expression of community and Board support seems to be in contrast with some action steps that have been taken by the Board. Despite repeated invitations only one Board member has participated or viewed the CDEP. Local funds to support the CDEP curriculum revision were not made available. Though there have been a series of curriculum studies and an updating of curriculum grade and subject area guides, career education was not adequately fused into the new guides.

Curriculum Development

One phase of the evaluation of CDEP was to provide teachers the opportunity to evaluate the Career Development Curriculum Guides developed for CDEP by Metropolitan Education Council

for Staff Development. To implement this phase of the evaluation an assessment form (see Instrument Catalog) was developed by IDEA and approved by the CDEP staff. During the assessment period in early May, 1973 each junior high school teacher who participated in CDEP was sent an assessment form and asked to return it to the Institute along with the other assessment materials. A total of 92 assessment instruments were sent to the three junior high schools in the project; Brown, Evans and Jefferson. Only six teachers returned the questionnaires. This was, of course, disappointing, but there may have been many reasons for the low percent of respondents.

One reasonable hypotheses is that, in fact, few teachers are using these guides. Though time, desire and motivation to complete these assessments are further hypotheses that are reasonable. As evaluators, we must assume that very few of the teachers are applying the guides to their curriculum. Most of the CDEP junior high participants in CDEP are listed as teachers involved in the development of the guides. This could have discouraged them from answering the questionnaire and, in effect, evaluating their own efforts. However, none of the IDEA observers indicated that they had seen any of the guides in evidence during their class visits.

Among the specific items referred to by the respondents to the questionnaire were the following:

1. The guide was not useful to students - it could not be used for student self study.
2. The guides were not organized to parallel the texts used in D.C. schools.

3. Teachers had difficulty in finding their way through the guides.
4. Little was presented at the students level. Activities did not adequately concern the grade level of the students.

Generally, the respondents did not find the guides useful.

A review of the teaching assignments of CDEP junior high school participants reveals that about 70 teachers should have been able to apply the purposes and activities in these manuals or guides directly to their classroom activities. However, by the close of school in May, 1973, only two of the guides were in the hands of teachers. A careful record of the use teachers make of the guides should be kept during the coming year.

Based on a brief review of the guides and the few questionnaires returned we make the following recommendations:

1. In the time now allotted during the staff development workshop, give those teachers who should have been using the guides an opportunity to talk through the use and the problems.
2. Strive during this period for an honest response to questions regarding the functional utility of the guides.
3. Provide demonstrations for teachers that illustrate classroom use of the guides.

To this point D.C. Schools has an investment of about $150,000 in these career development curriculum guides. At this point their utilitarian value is in question. It is our

suggestion that every effort be made to encourage teachers to use these guides. If certain weaknesses are pointed out that discourage the use of the guides, efforts will be made to overcome them to continue to foster maximum use of the guides as they exist.

Community Involvement

Career development encourages various ways for education to involve the community in the learning process. Generally project management seeks community support for the concepts that make up career education and seeks to draw on as many local resources as are available. Two instruments reported elsewhere in this report provide evidence concerning the degree of support and involvement of the local community in the Career Development Exemplary Project. The Decisionmaker Scale and the Teacher Practices Survey both are presented in the CDEP Instrument Catalog and were approved by the staff.

Based on a response of approximately twenty five percent from a mail questionnaire, we have concluded that there is local support for the CDEP program. A general expectancy for this type of questionnaire is eighteen to twenty percent response. A review of the overall results of that survey revealed that citizens and staff rank only reading as consistently more important than career education. The D.C. community does support the CDEP program and the concepts of career education.

Involvement of local career education resources in the learning process is in the domain of the individual teacher. He, more than any other person, determines when and how the resources are to be involved in the student's learning process. The teacher's career education practices, then, determine the

level of local involvement. A review of Table 18 on the results of the teacher practices survey reveals that five of the nineteen practices presented involve the use of community resources in the learning process. Shown below are those five practices and the percent of teachers reporting who never use the practices:

	% Never
Use of local resource persons in career education	35
Visits to self-employed persons	47
Visits to plants or factories	55
Visits to professional persons	45
Use of professional employment agencies	72

Approximately half of the teachers in the CDEP project never use community career education resources in the teaching learning process. There are surely valid process reasons why this is true. The complexity of arranging visits and field trips no doubt contribute to the sparsity of the use of such resources. There is no better way to learn about careers and the dignity of work than to see and experience it first hand.

It is concluded that there is wide community support for career education; however, there is limited utilization by the project teachers of community career education resources.

Model Generalizability

The District of Columbia Schools seeks answers to questions regarding the feasibility of adopting or adapting the CDEP

model in some or all of the D.C. schools. Decisions regarding the institutionalization of career education throughout the system are generally based upon a review of other aspects of the evaluation. In light of the problems and processes involved in the expansion of career education the following sections review certain aspects of the model as they related to generalization.

Student Outcomes

A review of the variety of student outcomes previously presented in the earlier sections ofthis report support the conclusion that the expansion of the model would have significant positive effect on the performance of students generally and especially regarding their attitude toward the world of work and the career selection process. On the bases of student outcomes,we recommend expansion of the model.

Cost Analyses

A review of the cost of implementing the CDEP project shows that the program is not without addition costs, but not completely prohibitive. The District will find it necessary to increase the per pupil allotment about $100.00 to implement the model as it is now operating. It is the Institute's position that the District will find it in the best interest of its students to begin planning now for the expansion of career education concepts into all schools. This process should begin to designate future monies for the program.

Staff and Board Attitudes

The Institute's survey of professional and layman attitudes toward the concepts of career education showed strong support for the program and a readiness within the community to accept the program. Generally, the professional and lay community view only reading as more important than career education. Policy and administrative action to date do not indicate that the support shown on paper has reached a decision making level.

Teacher Outcomes

A review of the data regarding the teaching and curriculum aspects of the CDEP model reveals,in our opinion,the area needing the most attention before the further expansion of the model. Teachers have not developed or implemented the important teaching practices and activities necessary to complete adoption of the CDEP model. Teaching guides, materials, techniques and practices are now in the early stages of development, rather than being ready to consider the present teacher participants as a training cadre. Expansion of the model in D.C. will require an expanded effort in teacher in-service education and staff development.

Continuation of the CDEP model in an exemplary project basis seems the sensible thing to do over the next year or two while present teachers and some additional ones continue to sharpen their skills. D.C. schools,meanwhile,can plan for the rapid and orderly assimulation of career education concepts into all schools over the next five to seven years.